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No. IX.

HAWSE-BUCKLER, AND SCUPPER.

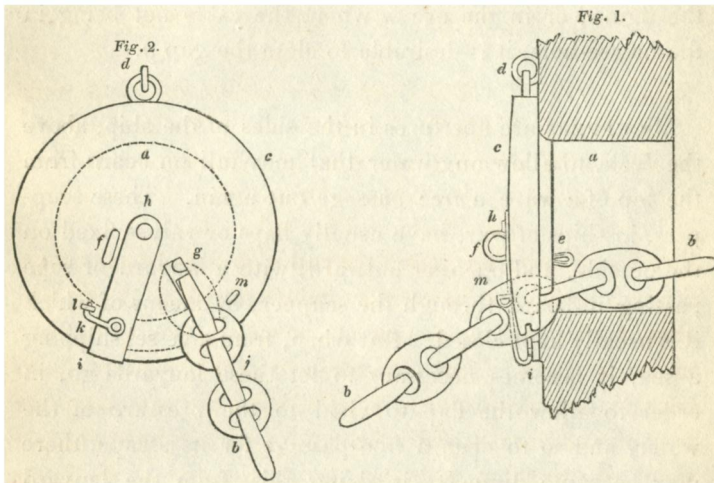
The Thanks of the Society were presented to Captain J. POLE, R.N., 1 Furnival's Inn, Holborn, for his Hawse-buckler and Scupper; Models of which have been placed in the Society's Repository.

THE hawse-holes are round apertures in the bow of a ship, through which the hawsers or cables attached to the anchors are run out or drawn in. Such of them as are not in use are closed from the inside by blind-bucklers, half-bucklers, or hawse-plugs, according to circumstances, to prevent the admission of water; for with a head-sea, or when the vessel is running before the wind, so much water would enter the hawse-holes as might endanger the safety of the vessel. In order to close these holes when a ship is under weigh, it is necessary to heave-to, which cannot be done with safety on a lee-shore; and, moreover, when the bucklers are on, the anchors cannot well be let go in a hurry, as the bucklers must previously be removed. That the hazard to a vessel with open hawse-holes is not imaginary, it may be sufficient to cite an example recorded in the Philosophical Transactions, in which a Dutch-built frigate, having come out of Sheerness, actually sunk at the Nore from the great quantity of water that ran in at the hawse-holes, the plugs having been forgotten to be put in.

Captain Pole applies his hawse-buckler on the outside of the vessel, by which arrangement the cable, when straining outwards, can never wedge it fast in the hole; and, though fitting easily, it effectually resists the

entrance of water, the impulse of the waves against it tending to keep it shut.

In the accompanying diagram, fig. 1 is a section

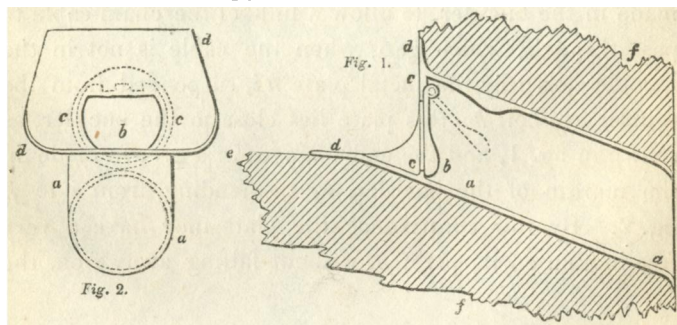


through the hawse-hole *a*, *bb* part of the chain-cable, *c* the buckler, hung on the outside of the hole by the ring-bolts *d*; the inner portion of the buckler enters the hole, and has a ring-bolt *e* by which it may be secured from within. It has also another ring-bolt *f* on the outside, by means of which it may be lifted up.

Fig. 2 is an outside view of the buckler: the dotted circle *a* represents the place of the hawse-hole; a gap *g* is made in the buckler, to allow a link of the chain-cable to pass through, which gap, when the cable is not in the hole, is closed by the metal plate *hi*, suspended from the central eye-bolt *h*: this plate lies close to the buckler, as shewn in fig. 1, and the end *i* moves in a groove made in the margin of the buckler, and extending from *i* to *j*, fig. 2. By this contrivance the plate may have a very free motion on its pivot *h*, without falling away from the

plane of the buckler. On the outside of this plate is a small hook *k*, by means of which it may be secured in the eye *l* when the cable passes through the hole, as shewn in the figure, or in the eye *m* when, the cable not being in the hawse-hole, it is desirable to close the gap *g*.

SCUPPERS are apertures in the sides of the ship, above the deck, to allow any water that may fall on board from the top of a wave a free passage out again. These scuppers, in ships of war, have usually flaps or valves fixed on the outside, and opening outward, with a lanyard or rope passing in-board through the scupper, by means of which it is usually kept closed. But when, from a vessel shipping a sea, it becomes necessary to let these lanyards go, in order to allow the flap to yield to the pressure of the water, and so to open a free passage for its escape, there may be some difficulty in doing this, from the lanyard being at that time under water. A further disadvantage in the usual arrangement is, that dirt accumulates round the lanyard within the scupper, where it is made fast to the flap, so as to prevent it from being closed; and in the endeavour to clear away the dirt, either the eye to which the lanyard is made fast, or the lanyard itself, is carried away. Captain Pole's flap is fitted within the scupper-hole, and at the upper end of it. In fig. 1, which is



a section, *a a* is the scupper-hole, penetrating obliquely through the ship's side *ff*. The flap *b* hangs on a close and easy joint, a little out of the perpendicular, and, therefore, pressing closely on the margin *c c*. Round the opening of the scupper-hole, on the deck, is a facing of metal plate *dd*, shewn more distinctly in fig. 2, which is a front view of the facing and flap. The two dotted circles in the same figure are the upper and lower orifices of the scupper-hole *a a*.

No. X.

STOPPER FOR A STEERING-WHEEL.

The SILVER MEDAL was presented to Mr. G. H. PEARCE, 6 Brunswick Terrace, Blackwall, for his Stopper for a Steering-Wheel; a Model of which has been placed in the Society's Repository.

THE pressure of the sea on the rudder is sometimes so strong, as to overpower the man or men at the steering-wheel; the consequence is, that the men are knocked down, and often seriously hurt, and the safety of the ship itself may be endangered by the rudder suddenly flying round. Mr. Pearce has done for the steering-wheel what has long ago been done for the crane and other similar machines; that is, he has attached a brake to it, capable, by its friction, of so far controlling the pressure of the rudder, as to enable the helmsman to retain the command of it.